Disruptive Digital Technology Services: The Case of Uber Car Ridesharing in Ghana

*Completed Research*

**Robert Ohene-Bonsu Simmons**  
Department of Information and Communication  
Technology, Zenith University College, Accra, Ghana  
ohene.simmons@zenithuniversitycollege.org

**Abstract**

The focus of this study was to explore and understand how digital technology influenced Uber car ridesharing and its disrupt impacts on taxi services in Ghana. The study used affordance theory as a theoretical lens to provide an explanation of Uber car ridesharing service as disruptive digital technology in the taxi industry in Ghana.

The study used a qualitative interpretive case study approach to understand the role of ICT in Uber car ridesharing. This study identified four main affordances, which facilitate how digital ridesharing applications disrupt the traditional taxi industry in a developing country. These are opportunistic affordance, which involves available cars on the digital platform for the traveller, security affordance for both traveller and driver before any transaction, ubiquitous service offering affordance without any restriction unlike the traditional taxi services, and affordable transportation with automatic billing. The paper offers some recommendations for policy and academic considerations.

**Keywords**

ICT, disruptive digital technology, Uber, ridesharing, affordance theory, Ghana.

**Introduction**

The swift development in information and communication technology (ICT) and its related fields (such as Google map, Global Positioning System (GPS), mobile devices and applications (apps)) have become more advanced, diversified (e.g., in the transport and film industries, and print media) and globalized. The introduction of new technologies threaten existing ones in the mainstream market (Christensen and Bower 1996; Tellis 2006). The technology which underpins this disruptive process are referred to as disruptive digital technologies (Huang and Sošić 2010; Tan et al. 2017). New forms of work have the potential to disrupt and put existing industries, products or services at significant risk like what is happening in car ridesharing in the transport industry (Cusumano 2015; Greenwood and Wattal 2017; Li, Zhang, and Hu 2017). Car ridesharing is a service that arranges one-way transportation on short notice (Chan and Shaheen 2012). For example, Uber car ridesharing uses digital technologies to connect remote actors (the resource owner and the resource borrower) and facilitate an efficient matchmaking between them for travelling transactions (e.g., Rayle et al. 2016).

A taxi is an important travel mode in urban transportation system and it plays a critical role to meet travel needs within urban areas (Tang et al. 2016). As the sharing economy has gained prominence in the world economy, mobile apps ridesharing companies like Uber and Lyft in the US, WhipCar in England, Didi Chuxing in China, goCatch in Australia, and Ola in India have begun to challenge traditional transportation providers all over the world (Hoffmann, Ipeirotis, and Sundararajan 2016; Riasanow, Galic, and Böhm 2017; Tan et al. 2017). In urban areas, traditional taxi services have been facing challenges such as difficulty for travellers to take a taxi during peak hours. On the other hand, behaviors of taxi drivers searching for passengers increase the traffic congestion in the cities (Yu et al. 2017). However, from the highlighted
limitations in the traditional taxi services, it is plausible that the presence of Uber car ridesharing mitigates these market inefficiencies electronically (e.g., Greenwood and Wattal 2017). This outcome motivates the travellers with Internet-enabled mobile devices to submit trip requests using rider app, which is then routed to their drivers with driver app for the travelling transaction. On the other hand, this digital arrangement by Uber has disrupted the business operations of traditional taxi services.

A theory is needed to explain these disruptive capabilities that digital ridesharing applications afford. This paper contributes to the growing stream of research into digital disruption. Specifically, affordance theory (Gibson 1979) is presented to explain how multi-sided platforms can creatively meet the needs of commuters via digital technology affordances and thereby cause digital disruption. An affordance is an action possibilities and it emerges when actors use technology. The outcome however creates disruption when it supersedes the existing ones. Therefore, affordance theory fits the phenomenon being examined and this may produce a rich and deep description of artefact features and actors’ abilities to perform action.

Disruptive digital technology services by Uber car ridesharing and traditional taxi drivers have been researched in different contexts (e.g., Rayle et al. 2016; Sun and McIntosh 2016; Yu et al. 2017). These studies focus on developed countries where ICTs are well established, and the authors have suggested therefore further studies on several studies not covered in their studies. For instance, the need to examine the nature of digital innovation, digital market conditions and the nature of digital competition (Elbanna and Newman 2016). Cusumano (2015) also suggests further studies on how traditional firms must adapt and compete based on their own unique advantages. Furthermore, Ganguly et al.(2010) recommend that technological viewpoint should be directed toward further assessment and validation of disruptive technologies using more case studies, and Shin and Lee (2011) also call for further studies on car ridesharing outside Korea. Studies which explore technology affordance by actors is under-researched, as most of the studies always focus on disruptive digital technology without considering the actors’ affordance (e.g., Elbanna and Newman 2016; Hoffmann et al. 2016).

However, from the academic literature reviewed, it is relevant to determine how Uber digital technology services disrupt traditional taxi services in developing countries. There is, therefore, a need to understand the role of information systems (IS) in Uber car ridesharing in Ghana and to provide pertinent recommendations. For this study, actors refer to travellers (commuters, passengers or riders), drivers, and Uber IS professionals; and car refers to ride. Therefore, the purpose of this study is to understand how digital car ridesharing technologies disrupt traditional taxi services in developing country. The central question is how digital technology enabled Uber car ridesharing disrupts taxi services in Ghana?

The rest of the paper is organised as follows. The next section presents literature review on disruptive digital technology and impact, and follows by theoretical foundation: affordance theory. The subsequent two sections provide methodology and case description of the study. The case findings and analysis section follows to explain the description of events and issues, identification of key entities and interrelationships, and identified affordances. In the final section, discussions and conclude.

**Disruptive Digital Technology and Impact**

Digital technology is the origin of all disruptive technologies. Christensen (1997) maintains that some of these digital technologies may be combined and developed into digital innovation. The term “disruptive technology” was coined in 1997 by Christensen which refers to a new technology having lower cost and advanced performance measured by traditional criteria, but having higher ancillary performance (Christensen 1997; 2006; Elbanna and Newman 2016; Wenzel et al. 2015). Disruptive digital technology, however, creates growth in the industries it penetrates (e.g., the taxi industry) or creates an entirely new industry through the introduction of products and services that are dramatically cheaper, better, and more convenient by technological innovations (Kostoff, Boylan, and Simons 2004). Such technological innovations can be seen as disruptive (Davis and Farmer 2016; Utesheva, Ceecez-Keemanov, and Schlagwein 2012; Shin and Lee 2011) as they change behaviors and expectations of users or stakeholders worldwide. Though, early observations suggest disruptive digital technology has the greatest negative impact on media-based industries (Adda, Ottaviani, Demange, and Auriol 2005; Ganguly, Nilchiani, and Farr 2010; Palekar and Seder 2012) but the argument on the issue has changed significantly. However, the literature reviewed...
shows that, no specific industry is immune to the emerging disruptive digital technology. Therefore, any industry whereby ICT is germane is a potential candidate for disruptive digital technology.

Globally, several industries have been disrupted significantly by digital technology in competitions and have been discoursed in IS literature such as those in the transport industry (Greenwood and Watta 2017; Cusumano 2015), the television industry (Adda et al. 2005), the newspaper industry (Palekar and Sedera 2012), the music industry (Ganguly et al. 2010), the advertisement industry (Padgett and Mulvey 2007), the publishing industry (Baiyere and Salmela 2015), the cell phone industry (French and Shim 2016; Shim and Shin 2015), and the storage systems (Li, Zhang, and Hu 2017).

Recently, new business models powered by digital technologies have the potential to disrupt traditional industries (Greenwood and Watta 2017; Hoffmann et al. 2016) by sweeping aside existing business models. A typical example is Uber car ridesharing digital technology model that is disrupting the traditional public transportation industries in their countries of operation (Baiyere and Salmela 2015; Cramer and Krueger 2016; Cusumano 2015). The Uber digital platform or Uber apps connect drivers and riders at proximity and this has fundamentally transformed the taxi business (Wyman 2017). Moreover, Wyman describes Uber as taxi apps with a new way of matching taxi drivers with riders that significantly reduces the search costs (ibid). However, Rogers (2016) describes Uber as a digital technology that uses smartphone-based apps to connect drivers offering rides and passengers seeking them, and this key innovation has basically eradicated search costs as compared to the traditional taxi services. Similarly, Cramer and Krueger (2016) point out that Uber uses Internet-based mobile technology to match passengers and drivers, and this digital platform is providing unprecedented competition in the taxi business. Therefore, this innovation by Uber has really affected the traditional taxi services in competition (Wallsten 2015). In Ghana for instance, Uber car ridesharing is sweeping travellers and drivers from the traditional taxi services into its system via digital technology affordance (Degadjor 2018). In spite of all these from the literature reviewed, there is still a gap to understand how digital technology services disrupt the traditional taxi services. However, there is, therefore, a need for research on the phenomenon in Ghana.

**Theoretical Foundation: Affordance Theory**

Extant research seems to have overlooked providing explanations of how digital technologies disrupt traditional industries. To address this gap, the affordance theory (Bygstad, Munkvold, and Volkoff 2015; Gibson 1979; Leonardi 2011) provides a useful lens to guide preliminary understanding of actors’ lived experiences of disruption in traditional industries in which they operate. As Walsham (2006) points out in IS interpretive research, the choice of a particular theory is subjective and depends on whether the researcher finds the theory interesting or not. Affordance is an ‘action possibilities’ that arises in the interaction between an animal and its environment (Gibson 1979). It could also be a characteristic (or a set of characteristics) of an object, which offers a potential for action (ibid). Further, an affordance explains how actors perceive the properties of the environment or the objects in the environment to perform actions (Hafezieh and Eshraghian 2017; Norman 1988). The original concepts and principles however have been reworked in most IS research to understand managing work-life boundaries with mobile technologies (Cousins and Robey 2015); and social media, institutional innovation and affordances (Zheng, Holloway, and Kingdom 2014); e-hailing platform for delivering disruption in an emergent access economy (Tan et al. 2017). From these foregoing definitions and applications, affordances could be related to the context of car ridesharing as relationships between actors’ abilities and an artefact features to support their actions or functions. Affordances and digital technological change are invariably linked, and ICT applications increasingly build on the knowledge and skills of professionals on day-to-day practices. However, digital technology affordance includes what will motivate the actor to use the technology. For instance, Tan et al. (2017) underscore that motivational affordances include the functionalities of digital technology that determine whether and how it can support actors’ motivational needs.

**Methodology**

This study was based on an interpretivist research philosophy. The ontology in the study referred to investigation of disruptive digital technology services for car ridesharing in Ghana. Epistemologically, the author believed that the research issue could be best understood from the lived experiences of related actors.
like taxi drivers and Uber drivers (Kroeze 2011). With respect to methodology, the study used an interpretive case study approach to develop an in-depth understanding of how digital technology could create disruption in a taxi industry (Avergou 2013; Klein and Myers 1999; Walsham 2006). There are five different car ridesharing operators in Ghana as of February 2018, namely, Uber, Uru, Dropping, Yenko Taxi and Taxify, and all were located in Accra, the capital city of Ghana. However, Uber was selected as a case study because its services were within the context of the study. As noted by Benbasat, Goldstein, and Mead (1987) in IS research, it is always important to establish how and why certain questions are more appropriate for case studies in order to understand the nature and complexity of the process. Whereas Blonk (2003) also maintains that case studies are often conducted by researchers in order to gain a rich understanding of a phenomenon. These notions therefore were taken into account in the case study. The location of Uber Company was identified by snowballing (e.g., Fox 2006).

**Data Collection and Analysis**

In accordance with the interpretive paradigm, various sources were used for data collection, namely, interviews, artefact observation, printed and online information (Walsham, 2006) in order to obtain comprehensive insights into the phenomenon. The processes were guided by concepts from affordance theory (Bygstad et al. 2015; Gibson 1979). Field data were gathered between September 2017 and February 2018 via artefact observations, telephone, and face-to-face semi-structured interview techniques. Interviews are the main primary data source in interpretive research (Cousins and Robey 2015; Myers 1997; Walsham 2006) and these always support a researcher to access the interpretations of participants (Lee, Baskerville, and Pries-Heje 2015). Snowballing was used to identify relevant literature (Webster and Watson 2002; Boell and Ceeez-Kecmanovic 2014) from the year 2010 to 2018 and for potential case selection (Ponelis 2015), as well as the respondents (Fox 2006). The study collected sample data from IS professionals, drivers, and travellers through an interpretive epistemology by ensuring that reality is socially constructed (Walsham 2006) based on the professional positions (Walsham 1995a). The participants selected for the interview were forty-two, based on purposive sampling (Yanchar, South, Williams, Allen, and Wilson 2010). They are IS professional (2), drivers (25), and travellers (15).

Data collection and data analysis tend to be concurrent in interpretive paradigm (Myers 2009) and these informed the researcher to ask further questions that needed clarifications from the respondents. The primary data collected were based on field notes and audio recording with permission from the interviewees. Theoretical saturation provided an ideal for the researchers to indicate the end of the interview, when no new relevant information was needed (Müller-bloch and Kranz 2000). The author coded and analysed the interview transcripts to contextualise the car ridesharing from Uber digital technology affordances to meet actor’s needs. Additional follow-up interviews via telephone, WhatsApp, and e-mail were used to clarify essential points. Finally, the analysis ended with the philosophies of qualitative interpretive (Ponelis 2015; Walsham 1995b) when the author reached the saturation point for the analyses (Miles, Huberman, and Saldaña 2014). Thus, no further analysis was required.

**Case Description**

The author’s concentration was on disruptive digital technology, and the case company (Uber Ghana) was selected because of its disruptive nature of its transportation provision services in Ghana. Uber is the first company that developed and run ridesharing app via digital technology. It was formally launched in 2010 in San Francisco (Elbanna and Newman 2016). Uber is a digital technology-enabled company that connects travellers and drivers at the touch of a button together. As at now, the company operates in over 475 cities in over 75 countries spanning 6 continents (Elbanna and Newman 2016; Uber 2017) including Ghana that connects drivers and travellers at the touch of a command. It was launched in Ghana on June 11, 2016 including other seven African countries (Duah 2017; Uber 2017). Because the service is an on-demand via digital technology, it has brought a revolution in the taxi service in Ghana. Thus, most people argue that Uber car ridesharing should be treated as taxi business with the same regulations. Others, however, argue that Uber is a digital technology platform that connects drivers and travellers for their transactions. The company connects drivers-travellers with opportunity to take charge of their own careers and in doing so, have control over their own time and money via their mobile apps. The outcome of Uber digital technology-enabled service has disrupted the traditional taxi business in Ghana as some of the traditional taxi drivers and travellers have migrated into the Uber system. As a result, the company’s mobile app and the related
service it provides is described as a disruptive digital technology in Ghana because of its superb performance (Adogla-Bessa 2018; Degadjor 2018). In addition, Uber car ridesharing is attracting digital technology enthusiasts in Ghana for travelling by disrupting traditional taxi service especially among young people who are more technologically knowledgeable.

Case Findings and Analysis

To answer the question of how digital car ridesharing technologies disrupt traditional taxi services in developing country, this study used a modified version of Bygstad et al.’s (2015) affordance theory-based analysis framework. The framework is useful in identifying the mechanisms behind information systems phenomenon such as digital disruption. The key steps of the framework are: description of events issues, identification of key entities, theoretical re-description, retroduction: identification of candidate affordances, analysis of the set of affordances and associated mechanisms, and assessment of explanatory power.

Description of Events and Issues

There are three main issues in respect to the traditional taxi industry disruptions. These are: travellers’ and divers preference for Uber services, availability of mobile devices (IPad, Android, and Smartphones), and affordability of the network (Internet and Mobile Network).

The first issue concerns travellers’ and drivers’ preference for Uber services. The Uber car ridesharing via digital technology has made it possible for people to simply tap their mobile device such as smartphones and have a car arrive at their location in the minimum possible time. Thus, Uber has recognised the problem about taxi service and is providing digital technological solution through its mobile apps to match travellers and cars at a proximity, to pick a traveller from any location to any destination. For instance, for the traditional taxi service in Ghana, many restricted areas deny them to pick or drop travellers. Some of the places clearly indicate the restriction as “No Taxi Allowed”. On the other hand, for Uber car ridesharing, there is no restriction for travellers and some of them expressed their views as:

Uber car ridesharing is practically everywhere in Accra especially at special locations where taxis are banned, “No Taxi Allowed”. Because of this preference, I have ignored the service from taxi and now enjoying Uber car ridesharing, which can pick and drop me everywhere I want without any restriction.

The second issue concerns the availability of mobile devices. The availability of mobile devices such as iPAD, Android, and Smartphones have transformed the transportation services in Ghana into a digital platform. However, Uber Ghana has shown its provision of affordable, safe and reliable transport for travellers via digital technology affordance. For instance, one of the IS professionals explained availability of mobile devices and the role of ICT for the company in Ghana as:

Uber is purely ICT related, before any traveller or driver can be part of our system, s/he must first install our app and register with a mobile device. Our work is about how a traveller can locate a driver and how a driver can also locate a traveller via our mapping technology. Unlike the traditional taxi services where drivers search for travellers or vice-versa manually. As a result, most drivers and travellers have migrated from the traditional taxi services to our platform.

However, mobile devices enable drivers to match travellers and cars automatically at proximity via the Uber apps with GPS to save time for both actors in transaction. Consequently, the traditional taxi services are inconvenient for searching travellers or travellers searching for cars, which sometimes both parties spend a lot of time before getting their match. One of the drivers pointed out example of the traditional taxi service challenges:

I am a former taxi driver. Sometimes I have to travel for about an hour before I get a traveller. The process generates traffic congestion, time wasting, and consumption of fuel. However, with the driver’s app on my phone, it makes me transact all my driver-
traveller activities electronically and comfortably such as looking for travellers while other taxi drivers may spend time seeking for travellers.

On the other hand, a number of travellers emphasised on the role of their mobile devices in Uber car ridesharing compared to traditional taxi services in Ghana:

As for me with my mobile device, which is Internet-enabled, I am no more interested in taxi service in Accra. The Uber app installed on my phone always enables me to book a car online by tracking and accessing the vehicle at the comfort of my location for a fee.

The third issue concerns the affordability of the network subscription and usage. The central element in the artefact is a network that connects all the actors together on the Uber platform. Two network types were identified namely, the Internet and mobile network that enable drivers and travellers to execute their routine activities online. Uber manages all the online activities on its platform but mobile network telecommunication providers in Ghana, on the other hand, provide the network services. The actors expressed concerns about poor Internet service and additional Internet cost for using Uber app.

However, digital technology affordance is the core factor of how and why Uber car ridesharing disrupts taxi service in Ghana based on affordability of network, availability of mobile devices, and drivers-travellers' preference from Uber functionalities. Thus, a combination of these factors enables Uber to provide quality service, security, ubiquitous service and affordable billing to travellers and drivers with mobile devices and Internet that are camera-enabled. Because of these factors, however, Uber is attracting most digital technology enthusiasts who are travellers and drivers in Ghana from the traditional taxi services. One of the travellers expressed his understanding of how Uber car ridesharing, his mobile phone, and affordability of network have been disrupting taxi service in Ghana:

As for me, Uber is godsent — lower fares, clean vehicles, well-mannered drivers, affordable billing system, improved security and easy electronic payments. As a result, I prefer using Uber in Accra to using the traditional taxi services.

Identification of key Entities and interrelationships

The key entities behind Uber car ridesharing digital technologies service that disrupts those of the traditional taxi services are hardware device (Mobile devices with Internet and camera-enabled, and Computers); software (ridesharing apps (driver and rider), operating system for mobile device, GPS, Google map, Ghana post digital address systems (GPDAS), credit card, and mobile money); and network (Internet, and mobile network).

The first entity, is the hardware component which is the mobile device required by both travellers and drivers in order to have access to Uber digital platform. Other features around the mobile device to facilitate its functions are the camera-enabled, GPS-enabled, and Internet-enabled. These features however, constitute the entire hardware functionality for Uber digital platform.

The second identified entity is software. The software are the applications and system software that enable the hardware to function for Uber digital platform. The applications are the Uber app of which there are two types namely, the traveller (rider) app and driver app, GPS, Google map, and GPDAS. The Uber app is the gateway that enables both travellers and drivers to join the Uber digital platform. The Uber digital platform synchronises both apps together via geolocation features within the city such as GPS, Google map, and GPDAS. The role of the system software is to link the mobile device and apps together, which must always be ridesharing-enabled.

The final identified entity is the Internet. The role of the Internet is to enable drivers and travellers to download, install Uber mobile apps, and join the Uber platform for real-time transactions. As a result, the component enables a traveller to book a specific car from any location at any time once s/he is on the Uber platform.

The three aforementioned components constitute the car ridesharing system. That is, if one is omitted the rest cannot function to provide the service. The interdependencies could be temporal, structural or
complementary. The mobile device provides structural dependency for every actor, the Internet provides temporal dependency, and the Uber apps, installed on the mobile device, provide complementary dependency. The Uber apps installed on the mobile device are always via the Internet. As a result, both the mobile device and Uber apps are always available to both travellers and drivers offline. However, the Internet is the backbone that enables them to transact their travelling business via Uber digital online platform for effective transactions.

The three affordances are the processes for creating something new (Uber car ridesharing) to disrupt existing services (traditional taxi services) in Ghana. However, it is the mobile device affordance that the respondents could not afford to lose or change for the Uber car ridesharing. It is their strongest affordance. The ownership of mobile devices has overwhelmingly influenced the Uber car ridesharing service in Ghana. Consequently, this is the factor that has disrupted the traditional taxi services in Ghana.

Finally, the GPDAS via GPS enable Uber to provide swift service to travellers. The case analysis shows that, using Uber car ridesharing service, the map of Accra is controlled by travellers and drivers in their palm to supersede the services provided by traditional taxis. For instance, taxi drivers always operate on experience to pick and drop travellers and sometimes, find it difficult to locate some destinations that are new to them. However, ICT functionality provided by Uber has resolved the challenges faced by the traditional taxi drivers by providing location identity or geolocation for coordination. The outcome has encouraged a lot of travellers to use Uber car ridesharing service instead of the traditional taxi services in Ghana.

On the other hand, the individuals involved in the Uber car ridesharing service are IS professionals, drivers and travellers. They are the goal directors who determine the usage of digital technology or the and facilitate changes in an organisation or the industry. The organisations involved in the transport operations are the regulatory bodies namely Uber Ghana, Commercial Taxi Drivers Association of the Ghana Private Road Transport Union (GPRTU), and the Ministry of Transport. Their core mandate is to provide transport services to travellers in Ghana.

Furthermore, there is a relationship among the three entities and each of them cannot be isolated in the transport operations. First, the digital technologies are the artefacts that enable individuals and Uber Ghana (organisation) to perform specific functions in the car ridesharing service. Individuals are the second entity in the transport industry who make use of the artefacts. Finally, the organisations are the key stakeholders with regulatory power to protect and promote the system of travelling in Ghana.

**Candidate Affordances**

Several affordances could be realised. The first is opportunistic affordance. This occurs when a traveller opts for a vehicle in the ridesharing pool instead of considering a traditional taxi service. In this case, the traveller forgoes any benefit of using the traditional taxi service. The choice of Uber car ridesharing service is made possible by the mobile app available on the traveller’s and driver’s smartphones. The mobile app provides openness and transparent information about the traveller’s intended destination and matches him/her with a potential or agreeable driver who is in close proximity.

The second affordance is security affordance. In this instance, the ridesharing app provides security functions that enable both travellers and drivers to identify themselves with picture via camera-enabled mobile device (i.e., mobile phone or iPad). The ridesharing also provides automatic control of speed limit that ensures safety for both actors unlike the case of the traditional taxi service. In addition, digital records stored in the company’s database keep track of any transaction to support retrieval of items left by a traveller. The Uber mobile app has a log file that keeps track of digital records for both actors in transaction to identify themselves.

Ubiquitous service offering is the third affordance. This service is only available to actors on the ridesharing platform. Travellers who use the traditional taxi services do not enjoy this service. As indicated earlier, some places in Accra have “taxi is not allowed” restrictions that prohibit traditional taxis from operating there. The situation limits their areas of operation and income generation in comparison with the Uber car ridesharing services. Thus, this occurs when a traveller picks a car in the Uber ridesharing pool instead of
the traditional taxi services, which can be easily identified and prevented from entering the restricted areas. The Uber car ridesharing vehicles are not painted and cannot be identified as the traditional taxis. They look like individual private vehicles.

The final is affordable transportation. This occurs when a traveller opts for a car ridesharing instead of a taxi service because of lower fare. The traveller ignores unfair and over charges of the traditional taxi service and uses an affordable Uber car ridesharing instead. This is made possible by the Uber apps available on both drivers’ and travellers’ mobile devices. The Uber apps provide openness and transparent automatic billing based on distance covered in kilometers.

Discussions and Conclusion

The research findings demonstrate how digital technology affordance creates disruption in the taxi industry (Greenwood and Wattal 2017; Shin and Lee 2011). However, the findings show that most people who are ICT enthusiasts in Ghana are those who have migrated from using traditional taxi services to Uber car ridesharing, thus disrupting the traditional taxi services. Uber car ridesharing on the other hand possess special services for both travellers and drivers unlike the traditional taxi services such as automatic billing, security, ubiquitous services, and opportunity to select available cars by travellers before the travel transactions. The aforementioned reasons have increased Uber travellers and on the other hand, decreased the traditional taxi travellers as a way of a better taxi in the cities (Rayle et al. 2016). Consequently, these are some of the factors, which have punctuated the stability of the traditional taxi services in Ghana.

Overall, this study shows how digital technologies enable individuals and organisations to disrupt traditional taxi services in Ghana. The case study focused on Uber, a car ridesharing company in Ghana. The findings show how digital technologies enable the company to provide superb service to drivers and travellers in the transport industry. The study used affordance theory to explain the role of ICT in car ridesharing and how most travellers and drivers have migrated from the traditional taxi services to Uber service in Ghana. The study also shows that no industry is immune to digital technology disruption. The finding suggests that Uber must plan to have its own infrastructural to avoid Internet service providers in order to provide free Internet access to its travellers and drivers for their online transactions. In addition, policy makers in Ghana must take measures to improve the digital addressing systems to facilitate car ridesharing service. In future research, researchers should extend this study into other industries faced with digital technology disruption, the need to use theory to explain service change in the taxi industry, and the need to intensify the argument against disruptive digital technology companies in or outside Ghana.

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